# Amendments to the Specification:

Please replace the paragraph beginning at page 1, line 1 with the following:

This application claims priority from U.S. Provisional Application Serial No. 60/425,204, filed November 8, 2002, and from International Application PCT/DK03/00763, filed November 7, 2003, each of which is hereby incorporated by reference in its entirety.

Please replace the paragraph beginning at page 4, line 12 with the following (please note that the text on page 4, line 21 "tAPPAHGVtSAPDTRPAPGstAPP" has not been added by way of this amendment. This text was underlined in the specification as filed and it should be underlined in the unmarked version of this paragraph):

One example of this is the glycosylation of the cancer-associated mucin MUC1. MUC1 contains a tandem repeat O-glycosylated region of 20 residues (HGVTSAPDTRPAPGSTAPPA) (SEQ ID NO: 1) with five potential O-glycosylation sites. GalNAc-T1, -T2, and -T3 can initiate glycosylation of the MUC1 tandem repeat and incorporate at only three sites (HGVtSAPDTRPAPGstAPPA, GalNAc attachment sites in lower-case). GalNAc-T4 is unique in that it is the only GalNAc-transferase isoform identified so far that can complete the O-glycan attachment to all five acceptor sites in the 20 amino acid tandem repeat sequence of the breast cancer associated mucin, MUC1. GalNAc-T4 transfers GalNAc to at least two sites not used by other GalNAc-GalNAc<sub>4</sub>TAP24 transferase isoforms on the glycopeptide (tAPPAHGVtSAPDTRPAPGstAPP, (SEQ ID NO: 2) GalNAc attachment sites in lower case) 10. An activity such as that exhibited by GalNAc-T4 appears to be required for production of the glycoform of MUC1 expressed by cancer cells where all potential

sites are glycosylated <sup>12</sup>. Normal MUC1 from lactating mammary glands has approximately 2.6 O-glycans per repeat <sup>13</sup> and MUC1 derived from the cancer cell line T47D has 4.8 O-glycans per repeat <sup>12</sup>. The cancer-associated form of MUC1 is therefore associated with higher density of O-glycan occupancy and this is accomplished by a GalNAc-transferase activity identical to or similar to that of GalNAc-T4.

Please replace the paragraph beginning at page 11, line 21 with the following:

Figure 2 is a multiple sequence alignment (ClustalW) of putative lectin domains derived from 16 human polypeptide GalNAc-transferases. Potitions Positions of conserved motifs CLD and QxW in the  $\alpha$ ,  $\beta$ , and  $\gamma$  repeats are indicated. The numbering indicated in the margins reflects numbering of the analysed sequence region of each GalNAc-transferase. Conserved residues are indicated by black box'ing boxing. (SEQ ID NO: 3-18)

Please replace the paragraph beginning at page 28, line 28 with the following:

Expression to produce functional lectin domains of polypeptide GalNActransferases without the catalytic unit (or activity) can be carried out in any number of conventional expression systems familiar to those skilled in the art. In one embodiment, GalNAc-transferase lectins are expressed in a secreted soluble form, which can be recovered from the culture medium. Such secreted soluble forms lack the N-terminal cytoplasmic tail, transmembrane retention sequence, stem region and the catalytic unit. The boundaries of the catalytic units and lectin domains are defined by multiple sequence alignments and experimentation of lectin binding activity (multiple sequence alignment analysis of the C-terminal sequences polypeptide GalNAc-transferases including the most C-terminal boundaries of the catalytic domains and the entire lectin domains shown in Figure 2). The boundaries cannot be clearly defined but the most C-terminal well-conserved sequence motif of the catalytic units (WYLENVYP) (SEQ ID NO: 19) can be excluded from the lectin domains. Parts of or the entire catalytic domains may be included to produce

functional lectin domains, and inclusion of inactivating mutations in the catalytic units (e.g. mutations in the DxH motif important for donor substrate binding, or residues important for acceptor substrate binding <sup>4</sup>) may be used to avoid additional binding activity mediated through the catalytic units. In another embodiment, host cells (e.g. CHO cells) are engineered to express full coding polypeptide GalNAc-transferases with or without mutations in their catalytic units and binding mediated through lectin domains are detremiend in vivo in host cells.

Please replace the paragraph beginning at page 48, line 21 with the following:

Polypeptide GalNAc-transferases are highly conserved throughout evolution. Orthologous relationships can be defined from man to Drosophila, 48 <sup>48</sup> and orthologous members of all human polypetide GalNAc-transferase isoforms are clearly identifiable in mouse and rats, and likely all mammals.

Please replace the paragraph beginning at page 48, line 25 with the following:

Polypeptide GalNAc-transferases are predicted to be type II transmembrane Golgi-resident proteins with a domain structure depicted in Figure 1  $2^{\frac{2}{2}}$ . The N-terminal cytoplasmic tail, the hydrophic transmembrane signal sequence, and the stem region may be involved in directing Golgi-localization 47  $^{47}$ . The catalytic unit of the enzymes is approximately 300-350 amino acid residues and highly conserved in primary sequence among isoforms and also throughout evolution of the gene family 3,48  $^{3,48}$ . The C-terminal region of approximately 130 amino acids exhibits similarity with the galactose binding lectin, ricin. This region show little sequence similarity among isoforms and is poorly conserved in evolution  $3^{\frac{3}{2}}$ .

Please replace the Table beginning at page 50, with the following:

TABLE I. Primers used for PCR of soluble secreted GalNAc-transferase expression constructs.

GalNAc-T1:

EBHC121H: 5'-GCGGGATCCAGGACTTCCTGCTGGAGATG-3' (SEQ ID NO: 20)

EBHC107B: 5'-GCGGATCCTCAGAATATTTCTGGAAGGG-3' (SEQ ID NO: 21)

GalNAc-T2:

EBHC75D: 5'-GCGGAATTCTTAAAAAGAAGACCTTCATCACAGC-3' (SEQ ID NO: 22)

EBHC68: 5'-GCGGAATTCCTACTGCTGCAGGTTGAGC-3' (SEQ ID NO: 23)

GalNAc-T3:

EBHC219H: 5'-GCGGGATCCAACGATGGAAAGGAACATG-3' (SEQ ID NO: 24)
EBHC215: 5'-AGCGGATCCAGGAACACTTAATCATTTTGGC-3' (SEQ ID NO: 25)

GalNAc-T4:

EBHC318: 5'-GCGGGATCCTTTTCATGCCTCCGCAGGAGCC-3' (SEQ ID NO: 26) EBHC307: 5'-GCGGGATCCGACGAAAGTGCTGTTGTGCTC-3' (SEQ ID NO: 27)

GalNAc-T5:

EBHC909: 5'-GCGGGATCCTGCTTTAACTGGAGGGCTAGAGC-3' (SEQ ID NO: 28) EBHC907: 5'-GCGGGATCCATCAGTTACACTTCAGGCTTC-3' (SEQ ID NO: 29)

GalNAc-T6:

EBHC514H: 5'-GCGGGATCCCCTGGACCTCATGCTGGAGGCCATG-3' (SEQ ID NO: 30) EBHC511N: 5'-AGCGGATCCTGGGGATGATCTGGGTCCTAGAC-3' (SEQ ID NO: 31)

GalNAc-T7:

EBHC1122H: 5'-GCGAAGCTTCAGGATGAGGGAAGACAGAGATG-3' (SEQ ID NO: 32) EBHC1116H: 5'-GCGAAGCTTCTCTCTAAACACTATGGATCTTATTC-3' (SEQ ID NO: 33)

GalNAc-T8:

EBHC1820: 5'-GCGGGATCCTCTGAAAGAAAGTATGAAATTAGC-3' (SEQ ID NO: 34)
EBHC1821: 5'-GCGGGATCCTCACTGGCTGTTGGTCTGACC-3' (SEQ ID NO: 35)

GalNAc-T9:

EBHC1320: 5'-GCGGGATCCCTGCCGCCTGCAGGGCCGCTCCCAG-3' (SEQ ID NO: 36) EBHC1321: 5'-GCGGGATCCTCAGTGCCGTCGGTGTTTGATCC-3' (SEQ ID NO: 37)

GalNAc-T10:

EBHC2520: 5'-GCGGGATCCCCGCGAGCGGCAGCCCGACGGC-3' (SEQ ID NO: 38) EBHC2521: 5'-GCGGGATCCTCAGTTCCTATTGAATTTTTC-3' (SEQ ID NO: 39)

GalNAc-T11:

EBHC629: 5'-GCGAATTCGTGAAGTGACTCAGCCACTTAAG-3' (SEQ ID NO: 40) EBHC614: 5'-GCGAATTCGTCTCTGTCAGACACGTGTC-3' (SEQ ID NO: 41)

GalNAc-T12:

EBHC1051: 5'-GCGGGATCCGGCTCGGTGCTGCGGGCGCAGCG-3' (SEQ ID NO: 42)
EBHC1032: 5'-GCGGGATCCTCATAACATGCGCTCTTTGAAGAACC-3' (SEQ ID NO: 43)

GalNAc-T13:

EBHC2000: 5'-GCGGGATCCGATGTTGCACVVTCCCCACCACACC-3' (SEQ ID NO: 44)

EBHC2002: 5'-GCGGGATCCTCATCGTTCATCCACAGCATTG-3' (SEQ ID NO: 45)

### GalNAc-T14:

EBHC1720: 5'-GCGGGATCCTCTGCTGCCTGCATTGAGGGCTG-3' (SEQ ID NO: 46) EBH21721: 5'-GCGGGATCCTCATGTGCCCAAGGTCATGTTCC-3' (SEQ ID NO: 47)

## GalNAc-T15:

EBHC412: 5'-GCGGGATCCCAAGAGGAAGTTGGAGGTGCCG-3' (SEQ ID NO: 48) EBHC438: 5'-GCGGGATCCCAGGGGTCCTCAAGAGCTCACC-3' (SEQ ID NO: 49)

## GalNAc-T16:

EBHC1913: 5'-GCGGGATCCCTACTACTTATGGCAGGACAACCG-3' (SEQ ID NO: 50)
EBHC1912: 5'-GCGTCATGTGTGTGGCAACAGCTGCCACTG-3' (SEQ ID NO: 51)

Please replace the paragraph beginning at page 51, line 1 with the following:

Please replace the paragraph beginning at page 51, line 13 with the following:

pBKS-Histag-II was modified with the sequence:

Please replace the paragraph beginning at page 51, line 24 with the following:

# Human GalNAc-T12 DNA sequence:

ATGTGGGGGCGCACGGCGCGCGCGCTGCCCGCGGGAACTGCGGCGCCGGGAGGCGCTGTTGGTGCTC CTGGCGCTACTGGCGTTGGCCGGGCTGGGCTCGGTGCTGCGGCGCGCGTGGGGCCGGGGCCGGGGCTGCC GAGCCGGGACCCCGCGCACCCGGGCCGGGCGGGCGAGCCGGTCATGCCGCGGCCGCCGGTGCCGGCG AGCGTGCGGCTGCACCAGATTAACATCTACCTCAGCGACCGCATCTCACTGCACCGCCGCCTGCCCGAGCGC TGGAACCCGCTGTGCAAAGAGAAAATATGATTATGATAATTTGCCCAGGACATCTGTTATCATAGCATTT TATAATGAAGCCTGGTCAACTCTCCTTCGGACAGTTTACAGTGTCCTTGAGACATCCCCGGATATCCTGCTA GAAGAAGTGATCCTTGTAGATGACTACAGTGATAGAGAGCACCTGAAGGAGCGCTTGGCCAATGAGCTTTCG TCTGCGGCGAGGGGCGATGTTCTGACCTTCCTGGACTGTCACTGTGAATGCCACGAAGGGTGGCTGGAGCCG  $\tt TTCGAATACCTGGGGAACTCCGGGGAGCCCCAGATCGGCGGTTTCGACTGGAGGCTGGTGTTCACGTGGCAC$ ACAGTTCCTGAGAGGGAGAGGATACGGATGCAATCCCCCGTCGATGTCATCAGGTCTCCAACAATGGCTGGT GGGCTGTTTGCTGTGAGTAAGAAATATTTTGAATATCTGGGGTCTTATGATACAGGAATGGAAGTTTGGGGA GGAGAAAACCTCGAATTTTCCTTTAGGATCTGGCAGTGTGGTGGGGTTCTGGAAACACACCCATGTTCCCAT GTTGGCCATGTTTTCCCCAAGCAAGCTCCCTACTCCCGCAACAAGGCTCTGGCCAACAGTGTTCGTGCAGCT GAAGTATGGATGAATTTAAAGAGCTCTACTACCATCGCAACCCCCGTGCCCGCTTGGAACCTTTTGGG GATGTGACAGAGGAGGAGCTCCGGGACAAGCTCCAGTGTAAAGACTTCAAGTGGTTCTTGGAGACTGTG TATCCAGAACTGCATGTGCCTGAGGACAGGCCTGGCTTCTTCGGGATGCTCCAGAACAAAGGACTAACAGAC TACTGCTTTGACTATAACCCTCCCGATGAAAACCAGATTGTGGGACACCAGGTCATTCTGTACCTCTGTCAT GGCTGCATTGCTGTGGAAGCAGGAATGGATACCCTTATCATGCATCTCTGCGAAGAAACTGCCCCAGAGAAT CAGAAGTTCATCTTGCAGGAGGATGGATCTTTATTTCACGAACAGTCCAAGAAATGTGTCCAGGCTGCGAGG AAGGAGTCGAGTGACAGTTTCGTTCCACTCTTACGAGACTGCACCAACTCGGATCATCAGAAATGGTTCTTC AAAGAGCGCATGTTATGA (SEQ ID NO: 54)

Please replace the paragraph beginning at page 52, line 19 with the following:

# Human GalNAc-T12 amino acid sequence:

MWGRTARRRCPRELRRGREALLVLLALLALAGLGSVLRAQRGAGAAEPGPPRTPRPGRREPVMP RPPVPANALGARGEAVRLQLQGEELRLQEESVRLHQINIYLSDRISLHRRLPERWNPLCKEKKYDYDNLPRT SVIIAFYNEAWSTLLRTVYSVLETSPDILLEEVILVDDYSDREHLKERLANELSGLPKVRLIRANKKKGLVR ARLLGASAARGDVLTFLDCHCECHEGWLEPLLQRIHEEESAVVCPVIDVIDWNTFEYLGNSGEPQIGGFDWR LVFTWHTVPERERIRMQSPVDVIRSPTMAGGLFAVSKKYFEYLGSYDTGMEVWGGENLEFSFRIWQCGGVLE THPCSHVGHFSPSKLPTPRNKALANSVRAAEVWMDEFKELYYHRNPRARLEPFGDVTERKQLRDKLQCKDFK WFLETVYPELHVPEDRPGFFGMLQNKGLTDYCFDYNPPDENQIVGHQVILYLCHGMGQNQFFEYTSQKEIRY NTHQPEGCIAVEAGMDTLIMHLCEETAPENQKFILQEDGSLFHEQSKKCVQAARKESSDSFVPLLRDCTNSD HQKWFFKERML (SEQ ID NO: 55)

Please replace the paragraph beginning at page 52, line 31 with the following:

# Human GalNAc-T13 DNA sequence:

ATGCTCCTAAGGAAGCGATACAGGCACAGACCATGCAGACTCCAGTTCCTCCTGCTGCTCCTGATG  $\mathtt{CTGGGATGCGTCCTGATGATGGTGGCGATGTTGCACCCTCCCCACCACCACCCTGCACCAGACTGTCACAGCCC}$ CAAGCCAGCAAGCACAGCCCTGAAGCCAGGTACCGCCTGGACTTTGGGGAATCCCAGGATTGGGTACTGGAA GCTGAGGATGAGGGTGAAGAGTACAGCCCTCTGGAGGGCCTGCCACCCTTTATCTCACTGCGGGAGGATCAG CTGCTGGTGGCCGTGGCCTTACCCCAGGCCAGAAGGAACCAGAGCCAGGGCAGGAGAGGTGGGAGCTACCGC CTCATCAAGCAGCCAAGGAGGCAGGATAAGGAAGCCCCAAAGAGGGACTGGGGGGCTGATGAGGACGGGGAG GTGTCTGAAGAAGAGGGGTTGACCCCGTTCAGCCTGGACCCACGTGGCCTCCAGGAGGCACTCAGTGCCCGC ATCCCCTCCAGAGGGCTCTGCCCGAGGTGCGGCACCCACTGTGTCTGCAGCAGCACCCTCAGGACAGCCTG CCCACAGCCAGCGTCATCCTCTGTTTCCATGATGAGGCCTGGTCCACTCTCCTGCGGACTGTACACAGCATC AAGTCTGCTCTCAGCGAATATGTGGCCAGGCTGGAGGGGGTGAAGTTACTCAGGAGCAACAAGAGGCTGGGT GCCATCAGGGCCCGGATGCTGGGGGCCACCAGAGCCACCGGGGATGTGCTCGTCTTCATGGATGCCCACTGC GAGTGCCACCCAGGCTGGAGCCCCTCCTCAGCAGAATAGCTGGTGACAGGAGCCGAGTGGTATCTCCG GTGATAGATGTGATTGACTGGAAGACTTTCCAGTATTACCCCTCAAAGGACCTGCAGCGTGGGGTGTTGGAC TGGAAGCTGGATTTCCACTGGGAACCTTTGCCAGAGCATGTGAGGAAGGCCCTCCAGTCCCCCATAAGCCCC GACTCTCTTATGTCGCTGCGAGGTGGTGAAAACCTCGAACTGTCTTTCAAGGCCTGGCTCTGTGGTGGCTCT GTTGAAATCCTTCCCTGCTCTCGGGTAGGACACATCTACCAAAATCAGGATTCCCATTCCCCCTCGACCAG CATAGCCCAGAGGCCTTCTCCTTGAGCAAGGCTGAGAAGCCAGACTGCATGGAACGCTTGCAGCTGCAAAGG AGACTGGGTTGTCGGACATTCCACTGGTTTCTGGCTAATGTCTACCCTGAGCTGTACCCATCTGAACCCAGG CCCAGTTTCTCTGGAAAGCTCCACAACACTGGACTTGGGCTCTGTGCAGACTGCCAGGCAGAAGGGGACATC TGCACGGAGGAAGGCCTGGCCATCCACCAGCAGCACTGGGACTTCCAGGAGAATGGGATGATTGTCCACATT CTTTCTGGGAAATGCATGGAAGCTGTGGTGCAAGAAAACAATAAAGATTTGTACCTGCGTCCGTGTGATGGA AAAGCCCGCCAGCAGTGGCGTTTTGACCAGATCAATGCTGTGGATGAACGATGA (SEQ ID NO: 56)

Please replace the paragraph beginning at page 53, line 24 with the following:

# Human GalNAc-T13 amino acid sequence:

MLLRKRYRHRPCRLQFLLLLLMLGCVLMMVAMLHPPHHTLHQTVTAQASKHSPEARYRLDFGESQDWVLE
AEDEGEEYSPLEGLPPFISLREDQLLVAVALPQARRNQSQGRRGGSYRLIKQPRRQDKEAPKRDWGADED
GEVSEEEELTPFSLDPRGLQEALSARIPLQRALPEVRHPLCLQQHPQDSLPTASVILCFHDEAWSTLLRT
VHSILDTVPRAFLKEIILVDDLSQQGQLKSALSEYVARLEGVKLLRSNKRLGAIRARMLGATRATGDVLV
FMDAHCECHPGWLEPLLSRIAGDRSRVVSPVIDVIDWKTFQYYPSKDLQRGVLDWKLDFHWEPLPEHVRK
ALQSPISPIRSPVVPGEVVAMDRHYFQNTGAYDSLMSLRGGENLELSFKAWLCGGSVEILPCSRVGHIYQ
NQDSHSPLDQEATLRNRVRIAETWLGSFKETFYKHSPEAFSLSKAEKPDCMERLQLQRRLGCRTFHWFLA
NVYPELYPSEPRPSFSGKLHNTGLGLCADCQAEGDILGCPMVLAPCSDSRQQQYLQHTSRKEIHFGSPQH
LCFAVRQEQVILQNCTEEGLAIHQQHWDFQENGMIVHILSGKCMEAVVQENNKDLYLRPCDGKARQQWRF
DQINAVDER (SEQ ID NO: 57)

Please replace the paragraph beginning at page 54, line 1 with the following:

# Human GalNAc-T14 DNA sequence:

ATGAGGAGATTTGTCTACTGCAAGGTGGTTCTAGCCACTTCGCTGATGTGGGTTCTTGTTGATGTC AGGGCTGTTATTTCAAGAAACCAAGAAGGGCCAGGAGAAATGGGAAAAGCTGTGTTGATTCCTAAAGATGAC CAGGAGAAAATGAAAGAGCTGTTTAAAATCAATCAGTTTAACCTTATGGCCAGTGATTTGATTGCCCTTAAT AGAAGTCTGCCAGATGTAAGATTAGAAGGATGTAAGACAAAAGTCTACCCTGATGAACTTCCAAACACAAGT GTAGTCATTGTGTTTCATAATGAAGCTTGGAGCACTCTCCTTAGAACTGTTTACAGTGTGATAAATCGTTCC CCACACTATCTACTCTCAGAGGTCATCTTGGTAGATGATGCCAGTGAAAGAGATTTTCTCAAGTTGACATTA GAGAATTACGTGAAAAATTTAGAAGTGCCAGTAAAAATTATTAGGATGGAAGAACGCTCTGGGTTAATACGT GCCCGTCTTCGAGGAGCAGCTGCTTCAAAAGGGCAGGTCATAACTTTTCTTGATGCACACTGTGAATGCACG  ${\tt TTAGGATGGCTGGAGCCTTTGCTGGCAAGAATAAAGGAAGACAGGAAAACGGTTGTCTGCCCTATCATTGAT}$ GTGATTAGTGATGATACTTTTGAATATGGCTGGGTCAGACATGACTTATGGGGGGTTTTAACTGGAAACTG AATTTCCGCTGGTATCCTGTTCCCCAAAGAGAAATGGACAGGAGGAAAGGAGACAGAACATTACCTGTCAGG ACCCCTACTATGGCTGGTGGCCTATTTTCTATTGACAGAAACTACTTTGAAGAGATAGGAACTTACGATGCA GGAATGGATATCTGGGGTGGAGAGAATCTTGAAATGTCTTTTAGGATTTTGGCAATGTGGAGGCTCCTTGGAG ATTGTTACTTGCTCCCATGTTGGTCATGTTTTTCGGAAGGCAACTCCATACACTTTTCCTGGTGGCACTGGT TGTAAGCCCTTTTCTTGGTACCTAGAAAACATCTATCCGGACTCCCAGATCCCAAGACGTTATTACTCACTT GGTGAGATAAGAAATGTTGAAACCAATCAGTGTTTAGACAACATGGGCCGCAAGGAAAATGAAAAAGTGGGT ATATTCAACTGTCATGGTATGGGAGGAAATCAGGTATTTTCTTACACTGCTGACAAAGAAATCCGAACCGAT GACTTGTGCTTGGATGTTTCTAGACTCAATGGACCTGTAATCATGTTAAAATGCCACCATATGAGAGGAAAT CAGTTATGGGAATATGATGCTGAGAGACTCACGTTGCGACATGTTAACAGTAACCAATGTCTCGATGAACCT TCTGAAGAAGACAAAATGGTGCCTACAATGCAGGACTGTAGTGGAAGCAGATCCCAACAGTGGCTGCTAAGG
AACATGACCTTGGGCACATGA (SEQ ID NO: 58)

Please replace the paragraph beginning at page 54, line 25 with the following:

## Human GalNAc-T14 amino acid sequence:

MRRFVYCKVVLATSLMWVLVDVFLLLYFSECNKCDDKKERSLLPALRAVISRNQEGPGEMGKAVLI
PKDDQEKMKELFKINQFNLMASDLIALNRSLPDVRLEGCKTKVYPDELPNTSVVIVFHNEAWSTLLRTVYSV
INRSPHYLLSEVILVDDASERDFLKLTLENYVKNLEVPVKIIRMEERSGLIRARLRGAAASKGQVITFLDAH
CECTLGWLEPLLARIKEDRKTVVCPIIDVISDDTFEYMAGSDMTYGGFNWKLNFRWYPVPQREMDRRKGDRT
LPVRTPTMAGGLFSIDRNYFEEIGTYDAGMDIWGGENLEMSFRIWQCGGSLEIVTCSHVGHVFRKATPYTFP
GGTGHVINKNNRRLAEVWMDEFKDFFYIISPGVVKVDYGDVSVRKTLRENLKCKPFSWYLENIYPDSQIPRR
YYSLGEIRNVETNQCLDNMGRKENEKVGIFNCHGMGGNQVFSYTADKEIRTDDLCLDVSRLNGPVIMLKCHH
MRGNQLWEYDAERLTLRHVNSNQCLDEPSEEDKMVPTMQDCSGSRSQQWLLRNMTLGT (SEQ ID NO:
59)

Please replace the paragraph beginning at page 55, line 1 with the following:

# Human GalNAc-T15 DNA sequence:

ATGCGGCGCCTGACTCGTCGGCTGGTTCTGCCAGTCTTCGGGGTGCTCTGGATCACGGTGCTGCTTCT TCTGGGTAACCAAGAGGAAGTTGGAGGTGCCGACGGGACCTGAAGTGCAGACCCCTAAGCCTTCGGACGC TGACTGGGACGACCTGTGGGACCAGTTTGATGAGCGGCGGTATCTGAATGCCAAAAAGTGGCGCGTTGGT GACGACCCTATAAGCTGTATGCTTTCAACCAGCGGGAGAGTGAGCGGATCTCCAGCAATCGGGCCATCC CACCTTCCACAACGAAGCCCGCTCCACGCTGCTCAGGACCATCCGCAGTGTATTAAACCGCACCCCTACG CATCTGATCCGGGAAATCATATTAGTGGATGACTTCAGCAATGACCCTGATGACTGTAAACAGCTCATCA AATTGCCCAAGGTGAAATGCTTGCGCAATAATGAACGGCAAGGTCTGGTCCGGTCCCGGATTCGGGGCGC TGACATCGCCCAGGGCACCACTCTGACTTTCCTCGACAGCCACTGTGAGGTGAACAGGGACTGGCTCCAG CCTCTGTTGCACAGGGTCAAAGAAGACTACACGCGGGTGGTGTGCCCTGTGATCGATATCATTAACCTGG ACACCTTCACCTACATCGAGTCTGCCTCGGAGCTCAGAGGGGGGTTTGACTGGAGCCTCCACTTCCAGTG GGAGCAGCTCTCCCCAGAGCAGAAGCTCGGCGCCTGGACCCCACGGAAGCCCATCAGGACTCCTATCATA GCTGGAGGGCTCTTCGTGATCGACAAAGCTTGGTTTGATTACCTGGGGAAATATGATATGACATGGACA TCTGGGGTGGGGAGAACTTTGAAATCTCCTTCCGAGTGTGGATGTGCGGGGGCAGCCTAGAGATCGTCCC CTGCAGCCGAGTGGGGCACGTCTTCCGGAAGAAGCACCCCTACGTTTTCCCTGATGGAAATGCCAACACG GGCCATTCGCCCTGGAGAGGCCCTTCGGGAATGTTGAGAGCAGATTGGACCTGAGGAAGAATCTGCGCTG 

Please replace the paragraph beginning at page 55, line 29 with the following:

# Human GalNAc-T15 amino acid sequence:

MRRLTRRLVLPVFGVLWITVLLFFWVTKRKLEVPTGPEVQTPKPSDADWDDLWDQFDERRYLNAKK WRVGDDPYKLYAFNQRESERISSNRAIPDTRHLRCTLLVYCTDLPPTSIIITFHNEARSTLLRTIRSVLNRT PTHLIREIILVDDFSNDPDDCKQLIKLPKVKCLRNNERQGLVRSRIRGADIAQGTTLTFLDSHCEVNRDWLQ PLLHRVKEDYTRVVCPVIDIINLDTFTYIESASELRGGFDWSLHFQWEQLSPEQKLGAWTPRKPIRTPIIAG GLFVIDKAWFDYLGKYDMDMDIWGGENFEISFRVWMCGGSLEIVPCSRVGHVFRKKHPYVFPDGNANTYIKN TKRTAEVWMDEYKQYYYAARPFALERPFGNVESRLDLRKNLRCQSFKWYLENIYPELSIPKESSIQKGNIRQ RQKCLESQRQNNQETPNLKLSPCAKVKGEDAKSQVWAFTYTQQILQEELCLSVITLFPGAPVVLVLCKNGDD RQQWTKTGSHIEHIASHLCLDTDMFGDGTENGKEIVVNPCESSLMSQHWDMVSS (SEQ ID NO: 61)

Please replace the paragraph beginning at page 56, line 5 with the following:

# Human GalNAc-T16 DNA sequence:

Please replace the paragraph beginning at page 56, line 30 with the following:

# Human GalNAc-T16 amino acid sequence:

MRKIRANAIAILTVAWILGTFYYLWQDNRAHAASSGGRGAQRAGRRSEQLREDRTIPLIVTGTPSK GFDEKAYLSAKQLKAGEDPYRQHAFNQLESDKLSPDRPIRDTRHYSCPSVSYSSDLPATSVIITFHNEARST LLRTVKSVLNRTPANLIQEIILVDDFSSDPEDCLLLTRIPKVKCLRNDRREGLIRSRVRGADVAAATVLTFL DSHCEVNTEWLPPMLQRVKEDHTRVVSPIIDVISLDNFAYLAASADLRGGFDWSLHFKWEQIPLEQKMTRTD PTRPIRTPVIAGGIFVIDKSWFNHLGKYDAQMDIWGGENFELSFRVWMCGGSLEIVPCSRVGHVFRKRHPYN FPEGNALTYIRNTKRTAEVWMDEYKQYYYEARPSAIGKAFGSVATRIEQRKKMNCKSFRWYLENVYPELTVP VKEALPGIIKQGVNCLESQGQNTAGDFLLGMGICRGSAKNPQPAQAWLFSDHLIQQQGKCLAATSTLMSSPG SPVILQMCNPREGKQKWRRKGSFIQHSVSGLCLETKPAQLVTSKCQADAQAQQWQLLPHT (SEQ ID NO: 63)

Please replace the Table beginning at page 58, with the following:

# Table II. Primers used for amplification of GalNAc-transferase lectin domains

#### GalNAc-T1 lectin domain:

T1LECFOR: 5'-CAAAGGAAGCTTATGGAGATATATCGTCAAGAG-3' (SEQ ID NO: 64)

T1LECREV: 5'-GCAAGCTCGAGGCGGCCGCTCAGAATATTTCTGGAAGGGTGAC-3' (SEQ ID NO: 65)

### GalNAc-T2 lectin domain:

T2LECFOR: 5'-CAAGGAAGCTTCTTATGGAAATATTCAGAGCAGATTG-3' (SEQ ID NO: 66)

T2LECREV: 5'-GCAAGCTCGAGGCGGCCGCCTACTGCTGCAGGTTGAGC-3' (SEQ ID NO: 67)

#### GalNAc-T3 lectin domain:

T3LECFOR: 5'-CAAGGAAGCTTCATTTGGTGATCTTTCAAAAAGATTT-3' (SEQ ID NO: 68)
T3LECREV: 5'-GCAAGCTCGAGGCGGCCGCAGGAACACTTAATCATTTTGG-3' (SEQ ID NO: 69)

### GalNAc-T4 lectin domain:

T4LECFOR: 5'-AGAAAAGAAGCTTATGGTGATATTTCTG-3' (SEQ ID NO: 70) EBHC307: 5'-AGCGGATCCGACGAAGTGCTGTTGTGCT -3' (SEQ ID NO: 71)

#### GalNAc-T5 lectin domain:

T5LECFOR: 5'-CAAGGAAGCTTTAGATGTTGGCAACCTCACCCAGC-3' (SEQ ID NO: 72)

T5LECREV: 5'-GCAAGCTCGAGGCGGCCGCAAGCATCAGTTACACTTCAGGCTTC-3' (SEQ ID NO: 73)

### GalNAc-T6 lectin domain:

T6LECFOR: 5'-CAAGGAAGCTTCCTTCGGTGACATTTCGGAACG-3' (SEQ ID NO: 74)

T6LECREV: 5'-GCAAGCTCGAGGCGGCCGCTGGGTCCTAGACAAAGAGCC-3' (SEQ ID NO: 75)

#### GalNAc-T7 lectin domain:

T7LECFOR: 5'-AGAAAAGAAGCTTATGGGGATATATCGGAGCTG-3' (SEQ ID NO: 76)

T7LECREV: 5'-GCAAGCTCGAGGCGGCCGCTCTCTAAACACTATGGATGTTATTC-3' (SEQ ID NO: 77)

#### GalNAc-T8 lectin domain:

T8LECFOR: 5'-CAAGGAAGCTTTTGGAGACGTTTCTTCCAGAATG-3' (SEQ ID NO: 78)

T8LECREV: 5'-GCAAGCTCGAGGCGGCCGCTCACTGGCTGTTGGTCTGACCCC-3' (SEQ ID NO: 79)

#### GalNAc-T9 lectin domain:

T9LECFOR: 5'-CAAGGAAGCTTTCGGGGACGTGTCTGAGAGGCTG-3' (SEQ ID NO: 80)

T9LECREV: 5'-GCAAGCTCGAGGCGGCCGCTCAGTGCCGTGCGTGTTTGATCC -3' (SEQ ID NO: 81)

#### GalNAc-T10 lectin domain:

T10LECFOR: 5'-CAAGGAAGCTTCCGCTGGGGATGTCGCAGTCCAG-3' (SEQ ID NO: 82)

T10LECREV: 5'-GCAAGCTCGAGGCGGCCGCTCAGTTCCTATTGAATTTTTCC-3' (SEQ ID NO: 83)

### GalNAc-T11 lectin domain:

T11LECFOR: 5'-CAAGGAAGCTTGCAATATCAGTGAGCGTGTGG-3' (SEQ ID NO: 84)

T11LECREV: 5'-GCAAGCTCGAGGCGGCCGCCCACCTTAACCTTCCAAATGC-3' (SEQ ID NO: 85)

#### GalNAc-T12 lectin domain:

T12LECFOR: 5'-CAAGGAAGCTTGGGATGTGACAGAGAGGAAG-3' (SEQ ID NO: 86)

T12LECREV: 5'-GCAAGCTCGAGGCGGCCGCTCATAACATGCGCTCTTTGAAGAACC-3' (SEQ ID NO: 87)

### GalNAc-T13 lectin domain:

T13LECFOR: 5'-CAAGGAAGCTTCTGAGAAGCCAGACTGCATGG-3' (SEQ ID NO: 88)

T13LECREV: 5,-GCAAGCTCGAGGCGGCCGCTCATCGTTCATCCACAGCATTG-3' (SEQ ID NO: 89)

#### GalNAc-T14 lectin domain:

T14LECFOR: 5'-CAAGGAAGCTTATGGAGATGTGTCAGTCAGAAAAAC-3' (SEQ ID NO: 90)

T14LECREV: 5'-GCAAGCTCGAGGCGGCCGCTCATGTGCCCAAGGTCATGTTCC-3' (SEQ ID NO: 91)

### GalNAc-T15 lectin domain:

T15LECFOR: 5'-CAAGGAAGCTTTCGGGAATGTTGAGAGCAGATTG-3' (SEQ ID NO: 92)

T15LECREV: 5'-GCAAGCTCGAGGCGGCCGCTCAAGAACTCACCATGTCCCAGTG-3' (SEQ ID NO: 93)

GalNAc-T16 lectin domain:

T16LECFOR: 5'-CAAGGAAGCTTGCAGTGTGGCTACGCGGATAGAGCAGAGG-3' (SEQ ID NO: 94)

T16LECREV: 5'-GCAAGCTCGAGGCGGCCGCTCATGTGTGTGGCAACAGCTGCC-3' (SEQ ID NO: 95)

Please replace the paragraph beginning at page 59, line 18 with the following (please

note that the text on page 59, line 24 "TGA-stop" has not been added by way of this

amendment. This text was underlined and bolded in the specification as filed and it

should be underlined in the unmarked version of this paragraph):

T1 LECTIN DNA sequence

TCACCCTTCCAGAAATATTCTGA-stop (SEQ ID NO: 96)

Please replace the paragraph beginning at page 59, line 29 with the following:

T1 LECTIN Amino acid sequence

YGDISSRVGLRHKLQCKPFSWYLENIYPDSQIPRHYFSLGEIRNVETNQCLDNMARKENEKVGIFNCHGM GGNQVFSYTANKEIRTDDLCLDVSKLNGPVTMLKCHHLKGNQLWEYDPVKLTLQHVNSNQCLDKATEEDS

QVPSIRDCNGSRSQQWLLRNVTLPEIF\* (SEQ ID NO: 97)

Please replace the paragraph beginning at page 60, line 1 with the following (please

note that the text on page 60, line 8 "TAG-stop" has not been added by way of this

amendment. This text was underlined and bolded in the specification as filed and it

should be underlined in the unmarked version of this paragraph):

T2 LECTIN DNA sequence

 Please replace the paragraph beginning at page 60, line 10 with the following:

T2 LECTIN Amino acid sequence

YPELRVPDHQDIAFGALQQGTNCLDTLGHFADGVVGVYECHNAGGNQEWALTKEKSVKHMDLCLTVVDRA PGSLIKLQGCRENDSRQKWEQIEGNSKLRHVGSNLCLDSRTAKSGGLSVEVCGPALSQQWKFTLNLQQ\* (SEQ ID NO: 99)

Please replace the paragraph beginning at page 60, line 20 with the following (please note that the text on page 60, line 28 "TAA-stop" has not been added by way of this amendment. This text was underlined and bolded in the specification as filed and it should be underlined in the unmarked version of this paragraph):

#### T3 LECTIN DNA sequence

Please replace the paragraph beginning at page 60, line 30 with the following:

#### T3 LECTIN Amino acid sequence

 $\label{thm:conftwylnn:yevyvpdlnpv:sgyiksvgqplcldvgennqggkplimytch \\ GLGGNQYFEYSAQHEIRHNIQKELCLHAAQGLVQLKACTYKGHKTVVTGEQIWEIQKDQLLYNPFLKMCL \\ SANGEHPSLVSCNPSDPLQKWILSQND* <math>(SEQ\ ID\ NO:\ 101)$ 

Please replace the paragraph beginning at page 60, line 40 with the following (please note that the text on page 61, line 3 "TAG-stop" has not been added by way of this amendment. This text was underlined and bolded in the specification as filed and it

should be underlined in the unmarked version of this paragraph):

#### T4 LECTIN DNA sequence

Please replace the paragraph beginning at page 61, line 5 with the following:

## T4 LECTIN Amino acid sequence

AYGDISERKLLRERLRCKSFDWYLKNVFPNLHVPEDRPGWHGAIRSRGISSECLDYNSPDNNPTGANLSL FGCHGQGGNQFFEYTSNKEIRFNSVTELCAEVPEQKNYVGMQNCPKDGFPVPANIIWHFKEDGTIFHPHS GLCLSAYRTPEGRPDVQMRTCDALDKNQIWSFEK\* (SEQ ID NO: 103)

Please replace the paragraph beginning at page 61, line 15 with the following (please note that the text on page 61, line 23 "TGA-stop" has not been added by way of this amendment. This text was underlined and bolded in the specification as filed and it should be underlined in the unmarked version of this paragraph):

## T5 LECTIN DNA sequence

Please replace the paragraph beginning at page 61, line 27 with the following:

T5 LECTIN Amino acid sequence DVGNLTQQRELRKKLKCKSFKWYLENVFPDLRAPIVRASGVLINVALGKCISIENTTVILEDCDGSKELQ QFNYTWLRLIKCGEWCIAPIPDKGAVRLHPCDNRNKGLKWLHKSTSVFHPELVNHIVFENNQQLLCLEGN FSQKILKVAACDPVKPYQKWKFEKYYEA\* (SEQ ID NO: 105)

Please replace the paragraph beginning at page 61, line 36 with the following (please

note that the text on page 61, line 44 "TAG-stop" has not been added by way of this amendment. This text was underlined and bolded in the specification as filed and it should be underlined in the unmarked version of this paragraph):

#### T6 LECTIN DNA sequence

Please replace the paragraph beginning at page 61, line 46 with the following:

T6 LECTIN Amino acid sequence

SFGDISERLQLREQLHCHNFSWYLHNVYPEMFVPDLTPTFYGAIKNLGTNQCLDVGENNRGGKPLIMYSC HGLGGNQYFEYTTQRDLRHNIAKQLCLHVSKGALGLGSCHFTGKNSQVPKDEEWELAQDQLIRNSGSGTC LTSQDKKPAMAPCNPSDPHQLWLFV\* (SEQ ID NO: 107)

Please replace the paragraph beginning at page 62, line 10 with the following (please note that the text on page 62, line 18 "TAG-stop" has not been added by way of this amendment. This text was underlined and bolded in the specification as filed and it should be underlined in the unmarked version of this paragraph):

### T7 LECTIN DNA sequence

TATGGGGATATATCGGAGCTGAAAAAATTTCGAGAAGATCACAACTGCCAAAGTTTTAAGTGGTTCATGG
AAGAAATAGCTTATGATATCACCTCACACTACCCTTTGCCACCCCAAAAATGTTGACTGGGGAGAAATCAG
AGGCTTCGAAACTGCTTACTGCATTGATAGCATGGGAAAAACAAATGGAGGCTTTGTTGAACTAGGACCC
TGCCACAGGATGGGAGGGAATCAGCTTTTCAGAATCAATGAAGCAAATCAACTCATGCAGTATGACCAGT
GTTTGACAAAGGGAGCTGATGGATCAAAAGTTATGATTACACACTGTAATCTAAATGAATTTAAGGAATG
GCAGTACTTCAAGAACCTGCACAGATTTACTCCATATTCCTTCAGGAAAGTGTTTAGATCGCTCAGAGGTC
CTGCATCAAGTATTCATCTCCAATTGTGACTCCAGTAAAACGACTCAAAAAATGGGAAATGAATAACATCC
ATAGTGTTTAG-stop (SEQ ID NO: 108)

Please replace the paragraph beginning at page 62, line 20 with the following:

T7 LECTIN Amino acid sequence

YGDISELKKFREDHNCQSFKWFMEEIAYDITSHYPLPPKNVDWGEIRGFETAYCIDSMGKTNGGFVELGPCHR MGGNQLFRINEANQLMQYDQCLTKGADGSKVMITHCNLNEFKEWQYFKNLHRFTHIPSGKCLDRSEVLHQVFI SNCDSSKTTQKWEMNNIHSV\* (SEQ\_ID\_NO: 109)

Please replace the paragraph beginning at page 62, line 30 with the following:

T8 LECTIN DNA sequence

GACGTTTCTTCCAGAATGGCACTCCGGGAAAAACTGAAATGTAAAACTTTTGACTGGTACCTGAAAAATGTTT
ATCCACTCTTGAAGCCACTCCACACCATCGTGGGCTATGGAAGAATGAAAAACCTATTGGATGAAAAATGTCTG
CTTGGATCAGGGACCCGTTCCAGGCAACACCCCCATCATGTATTACTGCCATGAATTCAGCTCACAGAATGTC
TACTATCACCTAACTGGGGAGCTCTATGTGGGACAACTGATTGCAGAGGCCAGTGCTAGTGATCGCTGA
CAGACCCTGGCAAGGCGGAGAAGCCCACCTTAGAACCATGCTCCAAGGCAGCTAAGAATAGACTGCATATATA
TTGGGATTTTAAACCGGGAGGAGCTGTCATAAACAGAGATACCAAGCGGTGTCTGGAGATGAAGAAGGATCTT
TTGGGTAGCCACGTGCTTGTGCTCCAGACCTGTAGCACGCAAGTGTGGGAAATCCAGCACACTGTCAGAGACT
GGGGTCAGACCAACAGCCAGTGA// (SEQ ID NO: 110)

Please replace the paragraph beginning at page 62, line 42 with the following:

T8 LECTIN Amino acid sequence

FGDVSSRMALREKLKCKTFDWYLKNVYPLLKPLHTIVGYGRMKNLLDENVCLDQGPVPGNTPIMYYCHEFSSQ NVYYHLTGELYVGQLIAEASASDRCLTDPGKAEKPTLEPCSKAAKNRLHIYWDFKPGGAVINRDTKRCLEMKK DLLGSHVLVLQTCSTQVWEIQHTVRDWGQTNSQ// (SEQ ID NO: 111)

Please replace the paragraph beginning at page 63, line 5 with the following (please note that the text on page 63, line 14 "TGA-stop" has not been added by way of this amendment. This text was underlined and bolded in the specification as filed and it should be underlined in the unmarked version of this paragraph):

T9 LECTIN DNA sequence

TTCGGGGACGTGTCTGAGAGGCTGGCCCTGCGTCAGAGGCTGAAGTGTCGCAGCTTCAAGTGGTACCTGG
AGAACGTGTACCCGGAGATGAGGGTCTACAACAACACCCTCACGTACGGAGAGGTGAGAAACAGCAAAGC
CAGTGCCTACTGTCTGGACCAGGGAGCGGAGGACGGCGACCGGGCGATCCTCTACCCCTGCCACGGGATG
TCCTCCCAGCTGGTGCGGTACAGCGCTGACGGCCTGCTGCAGCCTCTTGGCTCCACAGCCTTCT
TGCCTGACTCCAAGTGTCTGGTGGATGACGGCACGGGCCGCATGCCCACCCTGAAGAGGTGTGAGGATGT
GGCGCGGCCAACACACGGGCTGTGGGACTTCACCCAGAGTGGCCCCATTGTGAGCCGGGCCACGGGCCGC
TGCCTGGAGGTGGAGATGTCCAAAGATGCCAACTTTGGGCTCCGGCTGGTGGTACAGAGGTGCTCGGGGC
AGAAGTGGATGATCAGAAACTGGATCAAACACGCACGGCACTGA-stop (SEQ ID NO: 112)

Please replace the paragraph beginning at page 63, line 16 with the following:

### T9 LECTIN Amino acid sequence

FGDVSERLALRQRLKCRSFKWYLENVYPEMRVYNNTLTYGEVRNSKASAYCLDQGAEDGDRAILYPCHGMSSQ LVRYSADGLLQLGPLGSTAFLPDSKCLVDDGTGRMPTLKRCEDVARPTQRLWDFTQSGPIVSRATGRCLEVEM SKDANFGLRLVVQRCSGQKWMIRNWIKHARH\* (SEQ ID NO: 113)

# Please replace the paragraph beginning at page 63, line 27 with the following:

#### T10 LECTIN DNA sequence

GCTGGGGATGTCGCAGTCCAGAAAAAGCTCCGCAGCTCCCTTAACTGCAAGAGTTTCAAGTGGTTTATGA
CGAAGATAGCCTGGGACCTGCCCAAATTCTACCCACCCGTGGAGCCCCCGGCTGCAGCTTGGGGGGAGAT
CCGAAATGTGGGCACAGGGCTGTGTGCAGACACAAAGCACGGGGCCTTGGGCTCCCCACTAAGGCTAGAG
GGCTGCGTCCGAGGCCGTGGGGAGGCTGCCTGGAACAACATGCAGGTATTCACCTTCACCTGGAGAGAG
ACATCCGGCCTGGAGACCCCCAGCACACCAAGAAGTTCTGCTTTGATGCCATTTCCCACACCAGCCCTGT
CACGCTGTACGACTGCCACAGCATGAAGGGCAACCAGCTGTGGAAATACCGCAAAGACCACGTGTAC
CACCCTGTCAGTGGCAGCTGCATGGACTGCAGTGAAAGTCTTCATGAACACCTGCAACC
CATCCTCTCTCACCCAGCAGTGGCTGTTTGAACACACCCAACTCAACAGTCTTGGAAAAAATTCAATAGGAA
CTGA (SEQ ID NO: 114)

# Please replace the paragraph beginning at page 63, line 37 with the following:

## T10 LECTIN Amino acid sequence

AGDVAVQKKLRSSLNCKSFKWFMTKIAWDLPKFYPPVEPPAAAWGEIRNVGTGLCADTKHGALGSPLRLEGCV RGRGEAAWNNMQVFTFTWREDIRPGDPQHTKKFCFDAISHTSPVTLYDCHSMKGNQLWKYRKDKTLYHPVSGS CMDCSESDHRIFMNTCNPSSLTQQWLFEHTNSTVLEKFNRN\* (SEQ ID NO: 115)

## Please replace the paragraph beginning at page 63, line 47 with the following:

### T11 LECTIN DNA sequence

TGCAATATCAGTGAGCGTGTGGAACTGAGAAAGAAGTTGGGCTGTAAATCATTTAAATGGTATTTGGATA
ATGTATACCCAGAGATGCAGATATCTGGGTCCCACGCCAAACCCCAACAACCCATTTTTGTCAATAGAGG
GCCAAAACGACCCAAAGTCCTTCAACGTGGAAGGCTCTATCACCTCCAGACCAACAAATGCCTGGTGGCC
CAGGGCCGCCCAAGTCAGAAGGGAGGTCTCGTGGTGCTTAAGGCCTGTGACTACAGTGACCCAAATCAGA
TCTGGATCTATAATGAAGAGCATGAATTGGTTTTAAATAGTCTCCTTTGTCTAGATATGTCAGAGACTCG
CTCATCAGACCCGCCACGGCTCATGAAATGCCACGGGTCAGGAGGATCCCAGCAGTGGACCTTTGGGAAA
AACAATCGGCTATACCAGGTGTCGGTTGGACAGTGCCTGAGAGCAGTGGATCCCTGGGTCAGAAGGGCT
CTGTCGCCATGGCGATCTCGCGATGGCTCCTCTTCACAGCAGTGGCATTTGGAAGGTTAA (SEQ ID
NO: 116)

# Please replace the paragraph beginning at page 64, line 9 with the following:

#### T11 LECTIN Amino acid sequence

 ${\tt NISERVELRKKLGCKSFKWYLDNVYPEMQISGSHAKPQQPIFVNRGPKRPKVLQRGRLYHLQTNKCLVAQGRPSQKGGLVVLKACDYSDPNQIWIYNEEHELVLNSLLCLDMSETRSSDPPRLMKCHGSGGSQQWTFGKNNRLYQVSVGQCLRAVDPLGQKGSVAMAICDGSSSQQWHLEG* (SEQ ID NO: 117)$ 

Please replace the paragraph beginning at page 64, line 20 with the following:

## T12 LECTIN DNA sequence

Please replace the paragraph beginning at page 64, line 31 with the following:

T12 LECTIN Amino acid sequence

DVTERKQLRDKLQCKDFKWFLETVYPELHVPEDRPGFFGMLQNKGLTDYCFDYNPPDENQIVGHQVILYL CHGMGQNQFFEYTSQKEIRYNTHQPEGCIAVEAGMDTLIMHLCEETAPENQKFILQEDGSLFHEQSKKCV QAARKESSDSFVPLLRDCTNSDHQKWFFKERML\* (SEQ ID NO: 119)

Please replace the paragraph beginning at page 64, line 41 with the following:

T13 LECTIN DNA sequence

Please replace the paragraph beginning at page 65, line 4 with the following:

T13 LECTIN Amino acid sequence

EKPDCMERLQLQRRLGCRTFHWFLANVYPELYPSEPRPSFSGKLHNTGLGLCADCQAEGDILGCPMVLAP CSDSRQQQYLQHTSRKEIHFGSPQHLCFAVRQEQVILQNCTEEGLAIHQQHWDFQENGMIVHILSGKCME AVVQENNKDLYLRPCDGKARQQWRFDQINAVDER\* (SEQ ID NO: 121)

## Please replace the paragraph beginning at page 65, line 14 with the following:

#### T14 LECTIN DNA sequence

TATGGAGATGTCAGTCAGAAAAACACTAAGAGAAAATCTGAAGTGTAAGCCCTTTTCTTGGTACCTAG
AAAACATCTATCCGGACTCCCAGATCCCAAGACGTTATTACTCACTTGGTGAGATAAGAAATGTTGAAAC
CAATCAGTGTTTAGACAACATGGGCCGCAAGGAAAATGAAAAAGTGGGTATATTCAACTGTCATGGTATG
GGAGGAAATCAGGTATTTTCTTACACTGCTGACAAAGAAATCCGAACCGATGACTTGTGCTTGGATGTT
CTAGACTCAATGGACCTGTAATCATGTTAAAATGCCACCATATGAGAGGAAATCAGTTATGGGAATATGA
TGCTGAGAGACTCACGTTGCGACATGTTAACAGTAACCAATGTCTCGATGAACCTTCTGAAGAAGACAAA
ATGGTGCCTACAATGCAGGACTGTAGTGGAAGCAGATCCCAACAGTGGCTGCTAAGGAACATGACCTTGG
GCACATGA (SEQ ID NO: 122)

# Please replace the paragraph beginning at page 65, line 24 with the following:

#### T14 LECTIN Amino acid sequence

YGDVSVRKTLRENLKCKPFSWYLENIYPDSQIPRRYYSLGEIRNVETNQCLDNMGRKENEKVGIFNCHGMGGN QVFSYTADKEIRTDDLCLDVSRLNGPVIMLKCHHMRGNQLWEYDAERLTLRHVNSNQCLDEPSEEDKMVPTMQ DCSGSRSQQWLLRNMTLGT\* (SEQ ID NO: 123)

# Please replace the paragraph beginning at page 65, line 34 with the following:

#### T15 LECTIN DNA sequence

## Please replace the paragraph beginning at page 65, line 45 with the following:

# T15 LECTIN Amino acid sequence

FGNVESRLDLRKNLRCQSFKWYLENIYPELSIPKESSIQKGNIRQRQKCLESQRQNNQETPNLKLSPCAK VKGEDAKSQVWAFTYTQKILQEELCLSVITLFPGAPVVLVLCKNGDDRQQWTKTGSHIEHIASHLCLDTD MFGDGTENGKEIGVNPCESSLMSQHWDMVSS\* (SEQ ID NO: 125) Please replace the paragraph beginning at page 66, line 6 with the following:

T16 LECTIN DNA sequence

Please replace the paragraph beginning at page 66, line 6 with the following:

T16 LECTIN Amino acid sequence

SVATRIEQRKKMNCKSFRWYLENVYPELTVPVKEALPGIIKQGVNCLESQGQNTAGDFLLGMGICRGSAKNP QPAQAWLFSDHLIQQQGKCLAATSTLMSSPGSPVILQMCNPREGKQKWRRKGSFIQHSVSGLCLETKPAQLV TSKCQADAQAQQWQLLPHT\* (SEQ ID NO: 127)

After page 95 and before the claims, please insert a paper copy of the Sequence Listing.